REMARKS/ARGUMENTS

Claims 1, 3, 6-11 and 14-18 are pending in this application. Claims 2, 4, 5, 12 and 13 have been canceled in a prior reply.

35 U.S.C. §103 Rejections

Claims 1-18 stand rejected under 35 USC §103(a) as allegedly unpatentable over USPN 5,527,810 ("Ornstein") in view of USPN 5,597,809 ("Dreyer") "for the reasons set forth on pages 2-4 of the office action of December 28, 2007." August 6, 2008 Office Action ("OA"), page 2. Applicant respectfully traverses and notes that claims 2, 4, 5, 12 and 13 have previously been canceled.

According to the December 28, 2007 Office Action ("DOA"), "Ornstein teaches the use of the compounds that are antagonists NMDA amino acid receptors for the treatment of retinopathy." DOA, page 3 (*sic*). The Office states that Dreyer "teaches that memantine is an NMDA receptor antagonist." DOA, page 3. Based on these interpretations of Ornstein and Dreyer the Office concludes that, "[i]t would have been obvious to a person skilled in the art to use memantine for the treatment of retinopathy, motivated by the Dreyer reference...." DOA, page 3. The Office argues that,

> [o]ne skilled in the art would have been motivated to combine the teachings of [Ornstein and Dreyer] considering that one teaches the use of NMDA receptor antagonists for the treatment of retinopathy and the other relates to memantine as NMDA receptor antagonist. The substitution of one NMDA receptor antagonist for another would have been obvious to a person skilled in the art in the absence of evidence to the contrary.

DOA, page 3 (*sic*). This position is incorrect, however, because Ornstein and Dreyer are not analogous art and as a result, there is no motivation to combine them. Moreover, even if these references could be combined under 35 U.S.C. § 103, which they cannot, the combination still would not support the pending rejections. The combination cannot support the pending rejections because such a selective combination of elements from these references from the large variety of possibilities within them constitutes improper hindsight.

A. Ornstein and Dreyer are not Analogous Art and as a Result there is No Motivation to Combine Them

Determining whether art is analogous and appropriate to combine under 35 U.S.C. § 103 involves a two-part inquiry. First, to be analogous, the art must be "within the field of the inventor's endeavor." *In re Deminski*, 796 F.2d 436, 442 (Fed. Cir. 1986). If the art is outside the inventor's field of endeavor, art is only analogous if it is "reasonably pertinent to the particular problem with which the inventor was involved." *Id.* References are selected as being reasonably pertinent to the problem based on the judgment of a person having ordinary skill in the art. *In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992). ("[I]t is necessary to consider 'the reality of the circumstances,' – in other words, common sense – in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor." (*In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979)).

The inventor's field of endeavor is determined from "the scope explicitly specified in the background of the invention." *In re Wood*, 599 F.2d 1032, 1036 (C.C.P.A. 1979). Here, following a description of studies regarding NMDA, the Background of the Invention in Ornstein states that

> [t]hese studies strongly suggest that the delayed neuronal degeneration in brain ischemia involves glutamate excitotoxicity mediated at least in part by AMPA and/or NMDA receptor activation. Thus, AMPA and NMDA receptor antagonists may prove useful as neuroprotective agents and improve the neurological outcome of cerebral ischemia in humans.

Ornstein, Col. 2, ll. 57-63. Thus, Ornstein's field of endeavor was that of <u>improving the neurological outcome following cerebral ischemia in humans</u>.

The Background of the Invention in Dreyer states that, "[a]lthough visual impairment and visual loss as a result of treatment with ethambutol and other agents has been well-documented, the mechanism by which the damage occurs has not been described." Dreyer, Col. 1, ll. 43-46. Thus, Dreyer's field of endeavor was that of <u>elucidating the mechanism through which treatment with ethambutol (which is used to treat mycobacterial infections) can result in visual impairment and/or loss</u>.

Improving neurological outcome following cerebral ischemia in humans cannot reasonably be said to be within the same field of endeavor as elucidating the mechanism of visual impairment and/or loss following treatment with ethamabutol for a mycobacterial infection. The only basis for bringing these references together then, is the fact that they describe a common solution to different problems. In this context, the teachings of *Monarch Knitting* is illustrative.

In *Monarch Knitting*, the Federal Circuit held that in applying the two-step test to determine whether art is analogous, it is error to define "the problem in terms of its solution" because this involves "improper hindsight in the selection of the prior art relevant to obviousness." *Monarch Knitting Machinery Corp. v. Sulzer Morat GmbH,* 139, F.3d 877 (Fed. Cir. 1998). Stated another way, just because Ornstein and Dreyer mention NMDA receptor antagonists as a solution to a problem, this common solution does not serve to bring them into a common field of endeavor. *See, for example, In re Clay*, 966 F.2d at 659 ("[The reference] cannot be considered to be within [the inventor's] field of endeavor merely because both relate to the petroleum industry.").

Because Ornstein and Dreyer are not within the same field of endeavor, they may only be combined if one was "reasonably pertinent to the particular problem with which the inventor [of the other] was involved." *Id.* As stated, however, Ornstein and Dreyer are not reasonably pertinent to each other because the only relevant overlap they share is the common solution described above. Therefore a person of ordinary skill in the art would not reasonably seek to combine these references from non-analogous arts. *See, for example, United States Surgical Corp. v. Hospital Products International PTY Ltd.*, 701 F. Supp. 314 334 (D. Conn. 1988) ("The evidence indicates that the paper stapling art is not one that would lend itself to the resolution of the problems encountered in surgical stapling...."); *Schneider (Europe) AG v. SciMed Life Systems, Inc.*, 852 F. Supp. 813, 853 (D. Minn. 1994) *aff'd*, 60 F.3d 839 (Fed. Cir. 1995) (unpublished), *cert. denied*, 516 U.S. 990 (1995) ("Combining devices that have a short guide wire lumen, but are not used in dilation or coronary dilation, with ... Percutaneous Transluminal Coronary Angioplasty devices that have a long guide wire lumen, would not have been obvious to one of ordinary skill because they would not have been

reasonably pertinent to the particular problem with which [the inventor] was concerned."). Because there is no motivation to combine Ornstein and Dreyer the outstanding 35 U.S.C. § 103 rejections should be reconsidered and withdrawn.

B. The Selective Combination of Elements from a Large Variety of Possibilities Constitutes Improper Hindsight

In attempting to establish a *prima facie* case of obviousness, the Office must rely on evidence that clearly indicates that a worker of routine skill in the art would view the claimed invention as being obvious, as meant by 35 U.S.C. § 103. *Ex Parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (Pat. & Trademark Office Bd. App. 1979). Importantly, "[t]here is no basis for concluding that an invention would have been obvious solely because it is a combination of elements that were known in the art at the time of the invention." *Smiths Industries Medical Systems, Inc. v. Vital Signs, Inc.*, 183 F.3d 1347 (Fed. Cir. 1999). Particularly, an invention is not obvious if the inventor would have been motivated "to ... try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave ... no direction as to which of many possible choices is likely to be successful." *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342 (Fed. Cir. 2007). Stated another way,

> [t]he mere fact that a worker in the art could rearrange the parts of the reference device to meet the terms of the claims ... is not, by itself, sufficient to support a finding of obviousness. The prior art must provide a motivation or reason for the worker in the art, without the benefit of the appellant's specification, to make the necessary changes in the reference device.

Ex Parte Chicago Rawhide Manufacturing Company, 226 U.S.P.Q. 438 (Pat & Trademark Office Bd. App. 1984). Here, Ornstein states that the claimed compounds it describes can be used to treat "ocular damage and retinopathy." Col. 3, ll. 43-44. Ornstein does not distinguish between the many different types of retinopathy including, without limitation, diabetic retinopathy, proliferative diabetic retinopathy, retinopathy of prematurity (previously known as retrolental fibroplasia) or hypertensive retinopathy all of which have different causes and treatment options. *See, for example*, World Health Organization International Statistical Classification of Diseases and Related Health Problems (ICD-10). Similarly, Dreyer discloses the use of NMDA receptor antagonists

to treat visual impairments and/or loss caused by a mycobacterial infection treatment. Dreyer, however, lists numerous different classes of NMDA antagonists including uncompetitive open channel blocking agents, sigma receptor ligands, competitive NMDA receptor binding agents, agents that are active at the glycine receptor site of the NMDA receptor, agents that are active at the polyamine site of the NMDA receptor, etc. Dreyer, Cols 2-3. Within these classes, Dreyer provides close to 100 potential compounds that can be used. Nothing within Ornstein or Dryer, however, teaches or suggests using memantine for the treatment of a disease or condition contributed to by the migration or proliferation of retinal pigment epithelium or glial cells. Accordingly, applying these references in the manner currently argued by the Office constitutes improper hindsight. *See, for example, Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044 (Fed. Cir. 1988); *Maschinenfabrik Rieter, A.G. v. Greenwood Mills*, 340 F. Supp. 1103 (D.S.C. 1972) ("Hindsight reconstruction of prior art is not the applicable standard."). Because nothing within Ornstein or Dryer teaches or suggests using memantine for the treatment of a disease or condition contributed to by the migration or proliferation of retinal pigment epithelium or glial cells, the outstanding 35 U.S.C. § 103 rejections should be reconsidered and withdrawn.

C. Different Types of Retinopathy Can Be Treated Differently

In the outstanding Office Action mailed August 6, 2008 ("OA"), the Office states that "even if diabetic retinopathy was a totally different condition than retinopathy, there is no evidence of record to show that different types of retinopathy can be treated differently." OA, page 2.

Applicant respectfully notes that the elected species for examination is proliferative diabetic retinopathy, not diabetic retinopathy. *See* Applicant's September 24, 2007 Response to Restriction Requirement. Applicant also provides the following evidence that different forms of retinopathy can be treated differently.

Diabetic retinopathy can be reduced or prevented using lipid-modifying therapies. *See, for example*, Diabetic retinopathy: treatment and prevention, Diabetes and Vascular Disease Research, Vol. 4, Suppl. 3 (September 2007), pages S9-S11.

Hypertensive retinopathy can be reduced or prevented by treating the underlying hypertension. *See, for example*, www.medicinenet.com in collaboration with The Cleveland Clinic. Alternatively, retinopathy of prematurity, caused by disorganized growth of retinal blood vessels leading to scarring and retinal detachment, would not be affected by anti-hypertensive medications because hypertension is not associated with the etiology of this form of retinopathy. *See, for example*, Wikipedia, Retinopathy of prematurity, http://en.wikipedia.org/wiki/Retinopathy_of_prematurity. By analogy, retinopathy caused by prolonged sun exposure should not be affected by anti-hypertensive medications because hypertension is not associated with the etiology of this form of retinopathy. *See, for example*, Wikipedia, Retinopathy, http://en.wikipedia.org/wiki/Retinopathy. Thus, because different forms of retinopathies have different etiologies, it is clear that different forms of retinopathy can be treated differently.

Based on all the reasons provided above, Applicant respectfully requests that the Examiner reconsider and withdraw the pending rejections of claims 1, 3, 6-11, and 14-18 under 35 U.S.C. § 103.

CONCLUSION

Applicant respectfully asserts that the pending claims are in condition for allowance and request that a timely Notice of Allowance be issued in this case.

Please charge Deposit Account 01-0885 for any fees related to this response.

Respectfully submitted,

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